

Paper Info							Shared Control (Sykownik et al. 2017)				
							Distinct Loci of Manipulation (Two players share two distinct LoM)		Mutual Locus of Manipulation		No shared Control/ Indirect
Index	Title	Link to the paper	Author	Year	Database	Notes	entities	environment			One player controls an entity in the game, the other player can only observe and communicate but has no loci of manipulation in game
1	Asymmetric interface: User interface of asymmetric virtual reality for new presence and experience	https://www.mdpi.com/2073-8994/12/1/53	Jeong, K. and Kim, J. and Kim, M. and Lee, J. and Kim, C.	2020	Scopus		First person view HMD "Here, an HMD user performs the role by searching for an object corresponding to the correct answer in the VR space and grabs it with a hand." non_HMD "Here, an HMD user performs the role by searching for an object corresponding to the correct answer in the VR space and grabs it with a hand."				Third person view: "HMD In the case of third-person viewpoint, with the roles of observer and assistant, the non-HMD user views the hint (the number of letters, the first letter of the word) for the word and delivers the information required for finding a correct answer to the HMD user while observing the movements of the HMD user."
2	Enhancing Communication and Awareness in Asymmetric Games	https://link.springer.com/chapter/10.1007/978-3-030-34644-7_20	Bortolaso, C. and Bourdiol, J. and Graham, T.C.N.	2019	Scopus		One player controls environment and objects within it, the other only the camera	One player controls environment and objects within it, the other only the camera			
3	Audio source localization as an input to virtual reality systems	https://secure.aes.org/forum/pubs/conventions/2elib-19415	Kerure, A.A. and Freeman, J.	2018	Scopus		VR player interacts in VR to find the bucket, AR player controls magic torch entity, tablet player cues the cat entity	VR player interacts in VR to find the bucket, AR player controls magic torch entity, tablet player cues the cat entity			
4	RoleVR: Multi-experience in immersive virtual reality between co-located HMD and non-HMD users	https://link.springer.com/article/10.1007/s11042-019-08220-w	Lee, J. and Kim, M. and Kim, J.	2020	Scopus		Depending on variant				Depending on variant
5	MagicTorch: A context-aware projection system for asymmetrical VR games	https://dl.acm.org/doi/pdf/10.1145/3130859.3131341	Li, J. and Deng, H. and Michalatos, P.	2017	Scopus	almost duplicate of #11	VR player interacts in VR to find the bucket, AR player controls magic torch entity, tablet player cues the cat entity	VR player interacts in VR to find the bucket, AR player controls magic torch entity, tablet player cues the cat entity			
6	Self-overlapping maze and map design for asymmetric collaboration in room-scale virtual reality for public spaces	https://link.springer.com/chapter/10.1007/978-3-319-76908-0_19	Serubugo, S. and Skantarova, D. and Evers, N. and Kraus, M.	2018	Scopus		Yes				Yes
7	Facilitating asymmetric collaborative navigation in room-scale virtual reality for public spaces	https://link.springer.com/chapter/10.1007/978-3-319-76908-0_7	Serubugo, S. and Skantarova, D. and Evers, N. and Kraus, M.	2018	Scopus		Yes				Yes
8	Resolving spatial variation and allowing spectator participation in multiplayer VR	https://dl.acm.org/doi/pdf/10.1145/2984751.2984779	Sra, M. and Jain, D. and Caetano, A.P. and Calvo, A. and Hilton, E. and Schmandt, C.	2016	Scopus		Yes				Yes
9	ShareVR: Enabling co-located experiences for virtual reality between HMD and Non-HMD users	https://dl.acm.org/doi/pdf/10.1145/3025453.3025683	Gugenheimer, J. and Stemasov, E. and Frommel, J. and Rukzio, E.	2017	Scopus		Yes	Yes			
10	Astaire: A collaborative mixed reality dance game for collocated players	https://dl.acm.org/doi/pdf/10.1145/3311350.3347152	Zhou, Z. and Segura, E.M. and Duval, J. and John, M. and Isbister, K.	2019	Scopus		Yes				Yes
11	CatEscape: An asymmetrical multiplatform game connecting virtual, augmented and physical world	https://dl.acm.org/doi/pdf/10.1145/3130859.3130860	Li, J. and Deng, H. and Michalatos, P.	2017	Scopus	refer to #5 (almost duplicate thereof)					
12	GalVR: A novel collaboration interface using GVS	https://dl.acm.org/doi/pdf/10.1145/3139131.3141219	Sra, M. and Xu, X. and Maes, P.	2017	Scopus		while VR player physically navigates the VE				nonVR controls the gsv (which is kind of VR player) and tells about obstacles
13	A Demonstration of ShareVR: Co-Located Experiences for Virtual Reality between HMD and Non-HMD Users	https://www.uni-ulm.de/fileadmin/ua/baite_uni_ulm/ulm_inst_100/institut/Papers/ShareVR.pdf	Gugenheimer, J. and Stemasov, E. and Frommel, J. and Hukzio, E.	2018	Scopus	refer to #9 (demo paper thereof)					

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14	Neomento sad-vr treatment for social anxiety	https://seexplora.issa.org/stamp/stamp.jsp?arnumber=8942236	Streck, A. and Stepnicka, P. and Klaubert, J. and Wolbers, T.	2019	Scopus		yes "Our approach is, in its core, an asymmetric two-player game, where the patient is placed in the VE, while the therapist is granted control of the running simulation and can trigger challenges (e.g. trigger a cell phone) and assume control of the VAs (see Fig. 1). This approach solves two problems: "by giving the control of the environment to the therapist, they can assure that the amount of induced stress follows the pattern necessary for successful habituation of the patient [5]. This is manifested for example by the amount of attention the VAs pay to the user." Apart from the interactions enabled by the therapist, there are multiple methods available to the patient. In particular, it is necessary that the patient can navigate through the VE."	yes "Our approach is, in its core, an asymmetric two-player game, where the patient is placed in the VE, while the therapist is granted control of the running simulation and can trigger challenges (e.g. trigger a cell phone) and assume control of the VAs (see Fig. 1). This approach solves two problems: "by giving the control of the environment to the therapist, they can assure that the amount of induced stress follows the pattern necessary for successful habituation of the patient [5]. This is manifested for example by the amount of attention the VAs pay to the user." Apart from the interactions enabled by the therapist, there are multiple methods available to the patient. In particular, it is necessary that the patient can navigate through the VE."			
15	BirdquestTVR: A cross-platform asymmetric communication game	https://dl.acm.org/doi/pdf/10.1145/3341215.3358246	Smilovitch, M. and Lachman, R.	2019	Scopus		sounds like only the VR player has an in-game entity / representation, while the VR player controls the game environment / some systems of the virtual spaceship: "Each player has access to several ship systems. The VR player can turn engines on or off by physically reaching out and pressing buttons, while the tablet player can control a series of "boosters" and "roosters" by tapping buttons on their mobile device."	sounds like only the VR player has an in-game entity / representation, while the VR player controls the game environment / some systems of the virtual spaceship: "Each player has access to several ship systems. The VR player can turn engines on or off by physically reaching out and pressing buttons, while the tablet player can control a series of "boosters" and "roosters" by tapping buttons on their mobile device."			
16	The influence of social entities in virtual reality games on player experience and immersion	https://dl.acm.org/doi/pdf/10.1145/3102071.3102086	Liszio, S. and Emmerich, K. and Masuch, M.	2017	Scopus		non-HMD player controls tortoise, HMD player controls first-person perspective camera entity				
17	Telesight: Enabling asymmetric collaboration in VR between HMD user and Non-HMD users	https://dl.acm.org/doi/pdf/10.1145/3305367.3335040	Furukawa, T. and Yamamoto, D. and Sugawa, M. and Peiris, R. and Minamizawa, K.	2019	Scopus		yes nonVR controls the game environment, VR controls tries to find treasure with the help of nonVR	yes nonVR controls the game environment, VR controls tries to find treasure with the help of nonVR			
18	FaceDisplay: Towards asymmetric multi-user interaction for nomadic virtual reality	https://dl.acm.org/doi/pdf/10.1145/3173574.3173628	Gugenheimer, J. and Stemasov, E. and Sareen, H. and Rukzio, E.	2018	Scopus		Conductor? HMD controls first-person camera perspective, nonHMD controls hand entity representation	SpaceFace? HMD controls entity in space helmet, nonHMD "controls" a hand entity representation?			
19	Walkable Self-Overlapping Virtual Reality Maze and Map Visualization Demo: Public Virtual Reality Setup for Asymmetric Collaboration	https://dl.acm.org/doi/pdf/10.1145/3139131.3141774	Serubugo, Sule and Skantarova, Denisa and Evers, Nicolaj and Kraus, Martin	2017	ACM		non-VR "player" only engages in verbal communication / guidance. VR player navigates the VE				No shared control: non-VR "player" only engages in verbal communication / guidance may
Added via Snowball Approach											
20	Maze Commander: A Collaborative Asynchronous Game Using the Oculus Rift & the Sifteo Cubes	https://dl.acm.org/doi/pdf/10.1145/2658537.2658690	Pejman Sajjadi, Edgar Omar Cebolledo Gutierrez, Sandra Trullemans, and Olga De Troyer	2014	ACM		yes: VR "player" only engages in verbal communication / guidance and non-VR player interacts with sifteo cubes				Yes
21	FaceDisplay: Enabling Multi-User	https://dl.acm.org/doi/pdf/10.1145/3027063.3052962	Gugenheimer, J., Stemasov, E., Sareen, H., & Rukzio, E	2017	ACM		Yes: both slice fruit at whatever location they choose	Yes: both slice fruit at whatever location they choose			
22	Designing Shared Virtual Reality G	https://hal.inria.fr/hal-01640287/document	Stefan Liszio, Maic Masuch	2016	Scopus		Mech player and scout player both control entities in the VR world	Co-pilot player controls part of the game environment without entity representation in the world			
23	SpielRaum: Perspectives for Colla	https://dl.acm.org/doi/pdf/10.1145/2793107.2810306?casa_token=MVXK0uqFz-USA4AA4-JS8w8JJVO3d7	Michael Schmitz, Mert Akbal, Soenke Zehle	2015	ACM		VR player has no entity - non-VR player has the entity				VR player has no entity - non-VR player has the entity
24	Haptic Turk: A MotionPlatform Based on People	https://dl.acm.org/doi/10.1145/2556288.2557101	Lung-Pan Cheng, Patrick Lühne, Pedro Lopes, Christoph Sterz, and Patrick Baudisch.	2014	ACM		This: HMD player navigates, actuator "players" control motion cues in environment	This: HMD player navigates, actuator "players" control motion cues in environment			

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25	UbiBeam++: Augmenting Interactive Projection with Head-Mounted Displays.	https://dl.acm.org/doi/pdf/10.1145/2971495.2996747?casa_token=ISuXDO661hgAAA-AAq4w1R-vxGrW/SEEMNtp5RjyvvN3dWq_9uv9Hvtn6XLQ8Y46Zuw88LZjxyZ4HDsStGuQjh-EBg	Pascal Knierim, Markus Funk, Thomas Kosch, Anton Fedosov, Tamara Müller, Benjamin Schopf, MarcWeise, and Albrecht Schmidt.	2016	ACM			yes : no entity in the game			